

# Operation and Service Manual for HERMetic OXY all versions



**Note:** before using the instrument  
please read this book.



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**1. Table of contents**

<b><u>1.</u></b>	<b><u>TABLE OF CONTENTS</u></b>	<b><u>2</u></b>
<b><u>2.</u></b>	<b><u>GENERAL</u></b>	<b><u>3</u></b>
<b><u>3.</u></b>	<b><u>RECOMMENDATION FOR SAFE USE</u></b>	<b><u>3</u></b>
<b><u>4.</u></b>	<b><u>GENERAL INFORMATION</u></b>	<b><u>4</u></b>
4.1	DISCLAIMER	4
4.2	SHIPMENT NOTE	4
4.3	INITIAL INSPECTION	4
4.4	DOCUMENTATION DISCREPANCIES	4
4.5	WARRANTY	4
4.6	SPARE PARTS	5
4.7	SERVICE AND REPAIR	5
<b><u>5.</u></b>	<b><u>WORLDWIDE SERVICE STATIONS NETWORK</u></b>	<b><u>7</u></b>
<b><u>5.</u></b>	<b><u>OPERATION</u></b>	<b><u>9</u></b>
<b><u>6.</u></b>	<b><u>MAINTENANCE</u></b>	<b><u>9</u></b>
6.1	CARE	9
<b><u>7.</u></b>	<b><u>DRAWINGS</u></b>	<b><u>10</u></b>

## 2. General

The HERMetric OXY is designed for sampling inert gas in closed tanks before crude oil washing. It consists of a rubber sampling hose with an on-line valve at the upper end, an open hose end for connecting to a portable gas analyzer (not supplied with the OXY), a weight at the lower end and an adapter with a hose adjusting nut.

It is made for connecting to the HERMetric valves. When the OXY is connected to the valve, the operation is carried out with negligible escape of gas to the atmosphere.

## 3. Recommendation for safe use

This Operation and Service Manual is a guide in order to help the user to operate the instrument safely and correctly.

Nevertheless the maker disclaims all responsibility and liability for damage resulting from the use of the equipment regardless of the cause of the damage.

The I.M.O. requirements on Tanker Safety and Pollution Prevention, 1978 - resolution A.446 (XI) - § 6.6 states:

*“Before each tank is crude oil washed, the oxygen level shall be determined at a point 1 meter from the deck and at the middle region of the ullage space and neither of these determinations shall exceed 8 per cent by volume.”*

This product and his use is / may be related to international, national, local or company regulations or standards. It is the customer / user responsibility to ensure that the way to use the device complies with such applicable regulations or standards.

This device is a portable product. It must not be permanently installed on the tank and must be disconnected after use and stored in a safe and dry area.

## 4. General information

### 4.1 Disclaimer

This manual is designed and written to provide information with regard to the subject matter involved. Enraf Tanksystem SA makes no warranty, express or implied, that it is fit for any purpose whatsoever; or to the absolute sufficiency of the material presented.

Enraf Tanksystem SA assumes no responsibility for any inaccuracies in reproduction or errors in interpretation of any authority. Enraf Tanksystem SA reserves the right to modify or amend this manual, without prior notification, but Enraf Tanksystem SA assumes no responsibility to update or issue corrections.

### 4.2 Shipment note

The following parts should be included in the shipment:

- 1 instrument;
- 1 Operation and Service Manual.

### 4.3 Initial inspection

Check the contents of the shipment for completeness and note whether any damage has occurred during transport. Carry out the "Initial test before installing the instrument" to verify the good functioning. If the contents are incomplete, or if there is damage, do not use the device. A claim should be filled with the carrier immediately, and Enraf Tanksystem SA Sales or Service organization should be notified in order to facilitate the repair or replacement of the instrument.

### 4.4 Documentation discrepancies

The design of the instrument is subject to continuous development and improvement. Consequently, the instrument may incorporate minor changes in detail from the information contained in the manual.

### 4.5 Warranty

12 months after installation but max. 18 months after delivery ex works.

**The Vendor undertakes to remedy any defect resulting from faulty design materials or workmanship. The Vendor's obligation is limited to the repair or replacement of such defective parts by his own plant or one of his authorized service stations. The Purchaser shall bear the cost and risk of transportation of defective parts and repaired parts supplied in replacement of such defective parts.**

**This warranty does not apply to those items which by their nature are subject to deterioration or consumption in normal service, and which must be cleaned, or replaced on a routine basis.**

**When returned to Enraf Tanksystem SA equipment must be contamination-free. If it is determined that the Purchaser's equipment is contaminated, it will be returned to the Purchaser at the Purchaser's expense. Contaminated equipment will not be repaired, replaced, or covered under any warranty until such time that the Purchaser decontaminates the said equipment.**

The Purchaser shall notify by fax, telex or in writing of any defect immediately upon discovery, specifying the nature of the defect and/or the extent of the damage caused thereby.

Where no other conditions have been negotiated between the Vendor and the Purchaser "General Conditions 188" of United Nations shall apply.

Unauthorized repair or component replacement by non original spare parts by the Purchaser will void this guarantee and may impair the good functioning of the instrument.

This warranty is expressly in lieu of any and all other warranties and representations expressed or implied, and all other obligations or liabilities on the part of the Vendor (Enraf Tanksystem SA) including but not limited to, the warranty of merchantability or fitness for a particular purpose.

In no event shall Enraf Tanksystem SA be liable for indirect, incidental or consequential loss or

damage or failure of any kind connected with the use of its products or failure of its products to function or operate properly.

Enraf Tanksystem SA do not assume the indemnification for any accident or damage caused by the operation of its product and the warranty is limited to the replacement of parts or complete goods.

#### **4.6 Spare parts**

When ordering spares identify the spare part by TS number and description. Refer to section "Drawings".

Some spares might be repairable; in this case send part to any authorized service center or to the factory.

In case of urgency replacement units can be available while stocks last.

#### **4.7 Service and Repair**

The customer should take care of the freight and customs clearance charges. If units are sent on "freight collect " the charges will be invoiced to the customer.

When returning units or parts for repair to the factory please fill out a service request form (see next page).

## Service Request

Customer's address: .....  
 .....  
 .....  
 .....  
 .....

Telephone: .....

Telex: .....

Fax: .....

Type of unit or part: .....  
 .....  
 .....

Short description of defective unit or part: .....  
 .....  
 .....  
 .....

Do you want a quotation before repair is started:.....yes / no.....

Repaired unit has to be returned to the following address:

.....  
 .....  
 .....  
 .....  
 .....

## 5. Worldwide Service Stations network

*The updated list can be found on our website [www.tanksystem.com](http://www.tanksystem.com)*

COUNTRY	ADDRESS	TELEPHONE/FAX/E-MAIL
SWITZERLAND	ENRAF TANKSYSTEM SA 2, rue de l'Industrie CH-1630 BULLE	Tel : +41-26-91 91 500 Fax : +41-26-91 91 505 Tanksystem@honeywell.com
CANADA	PYLON ATLANTIC A Div. Of Pylon Electronics Inc. 31 Trider Crescent., DARTMOUTH, N.S. B3B 1V6	Tel : +1-902-4683344 Fax : +1-902-4681203 halifax_csr@pylonelectronics.com
CHINA	HUA HAI EQUIPMENT & ENGINEERING CO LTD Factory 7, Lane 1365, East Kang Qiao Road Kang Qiao Industrial Zone, Pu Dong SHANGHAI, P.C. 201315	Tel : +86-21-68183183 Fax : +86-21-68183115 huahaish@huahaiee.com
GREECE	SPANMARIN 86, Filonos Street GR-185 36 PIRAEUS	Tel : +30-210-4294498 Fax : +30-210-4294495 spanmarin@ath.forthnet.gr
JAPAN	DAIWA HANBAI CORPORATION LTD 2-10-31, Mitejima, Nishiyodogawa-ku OSAKA 555-0012	Tel : +81-6-64714701 Fax : +81-6-64729008 daiwa471@silver.ocn.ne.jp
KOREA	World Ocean CO., LTD Rm1001, Hae-deok Bldg., 1212-11 Choryang-dong Dong-Gu BUSAN	Tel : +82-51-462-2554/5 Fax : +82-51-462-0468 marine@worldocean.co.kr
MEXICO	URBAN DEL GOLFO S.A. DE C.V. Ave. Ejército Mexicano 1902 Col. Loma del Gallo 89460 CD. MADERO, TAMPS. MEXICO	Tel : +52-833-2170190 Fax : +52-833-2170190 urbansa@prodigy.net.mx
NETHERLANDS	B.V. TECHNISCH BUREAU UITTENBOGAART Brugwachter 13 NL-3034 KD ROTTERDAM	Tel : +31-10-4114614 Fax : +31-10-4141004 info@tbu.nl

*The updated list can be found on our website [www.tanksystem.com](http://www.tanksystem.com)*

<b>COUNTRY</b>	<b>ADDRESS</b>	<b>TELEPHONE/FAX/E-MAIL</b>
PORTUGAL	CONTROLIS Soc. Com. Equipamentos de Controlo, Lda. Rua Conceição Sameiro Antunes, 26E 2800-379 COVA DA PIEDADE	Tel : +351-21-2740606 Fax : +351-21-2740897 controlis@netc.pt
RUSSIA	NPP "GERDA" Vilisa Latsisa str. 17 Building 1 125480 MOSCOW	Tel : +7-495-7558845 Fax : +7-495-7558846 info@gerda.ru
SINGAPORE	HUBBELL INT'L (1976) PTE LTD 322 Thomson Road SINGAPORE 307665	Tel : +65-6-2557281 Tel : +65-6-2550464 Fax : +65-6-2532098 hubbell@mbox2.singnet.com.sg
SPAIN	E.N.I. Electronica y Neumatica Industrial, S.A. C/Jon Arrospide, 20 (Int.) 48014 BILBAO	Tel : +34-94-4746263 Fax : +34-94-4745868 eni.tecnica@eni.es
SWEDEN	INSTRUMENTKONTROLL Lars Petersson AB Varholmsgatan 1 414 74 GÖTEBORG	Tel : +46-31-240510 Tel : +46-31-240525 Fax : +46-31-243710 Info@instrumentkontroll.se
TURKEY	YEDI DENIZ Setustu, Izzetpasa Yok.1 TR 34427 Kabatas ISTANBUL	Tel : +90.212.251 64 10 / 3 lines Fax : +90.212.251 05 75 servicestation@yedideniz.net
UNITED ARAB EMIRATES	MARITRONICS TRADING L.L.C. P.O. Box 6488 Shed # 72, Jadaf Ship Docking Yard DUBAI	Tel : +971-4-3247500 Fax : +971-4-3242500 service@maritronics.com
UNITED KINGDOM	ENERGY MARINE (INTERNATIONAL) LTD. 12 Clipstone Brook Industrial Estate Cherrycourt Way LEIGHTON BUZZARD, BEDS LU7 4TX	Tel : +44-1525-851234 Fax : +44-1525-852345 info@engmar.com
U.S.A / TEXAS	HONEYWELL HERMETIC 4522 Center Street DEER PARK, TX 77536	Tel : +1-281-930 1777 Fax : +1-281-930 1222 Toll free call in the USA: 1-800-900 1778 hermetic@honeywell.com



## 5. Operation

1. Check that the on-line valve and the HERMetric valve are properly closed.
2. install the HERMetric OXY on the HERMetric valve via the quick coupling device.
3. Open the valve.
4. Slacken the adjusting nut on top of the OXY adapter to allow the sampling hose to be lowered to the desired level.
5. When the level is reached tighten the adjusting nut to secure the hose in position.
6. Install the monitoring equipment (gas analyser, not supplied with the OXY) at the free end of the ose.
7. Open the on-line valve.
8. Follow the operation instructions of the monitoring equipment manufacturer.
9. When the oxygen content is determined, close the on-line valve, slacken the adjusting nut and pull out the hose.
10. Take care not to damage the hose when through edge of hatch cover.
11. When the weight is stored in the OXY tube, close the HERMetric Compact/Deck valve and remove the OXY.
12. Clean the OXY the next check..

## 6. Maintenance

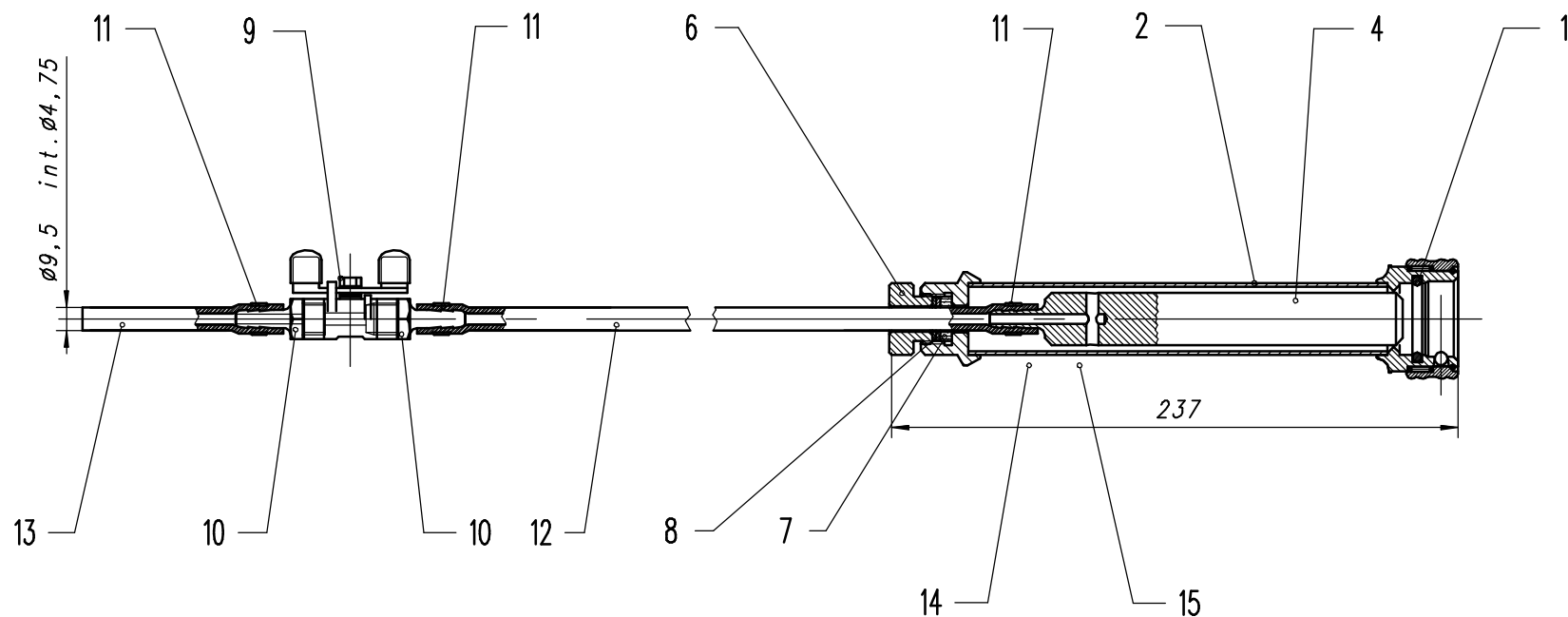
### 6.1 Care

For long working life, keep the HERMetric OXY clean and well lubricated and, when not in use, stored it in a dry and protected location.

When ordering spare parts, always state the drawing and the item number.

## 7. Drawings

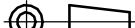
	ND	TS	DESCRIPTION
	30276	10070	OXY 15m Tanol hose St.St. 1"
	30408	10011	OXY 15m Tanol hose 1"
	30409	10012	OXY 30m Tanol hose 1"
	30413	10009	OXY without hose
	30414	10071	OXY 30m Tanol hose St.St. 1"
	41039	22564	Adaptor 1 1/2"



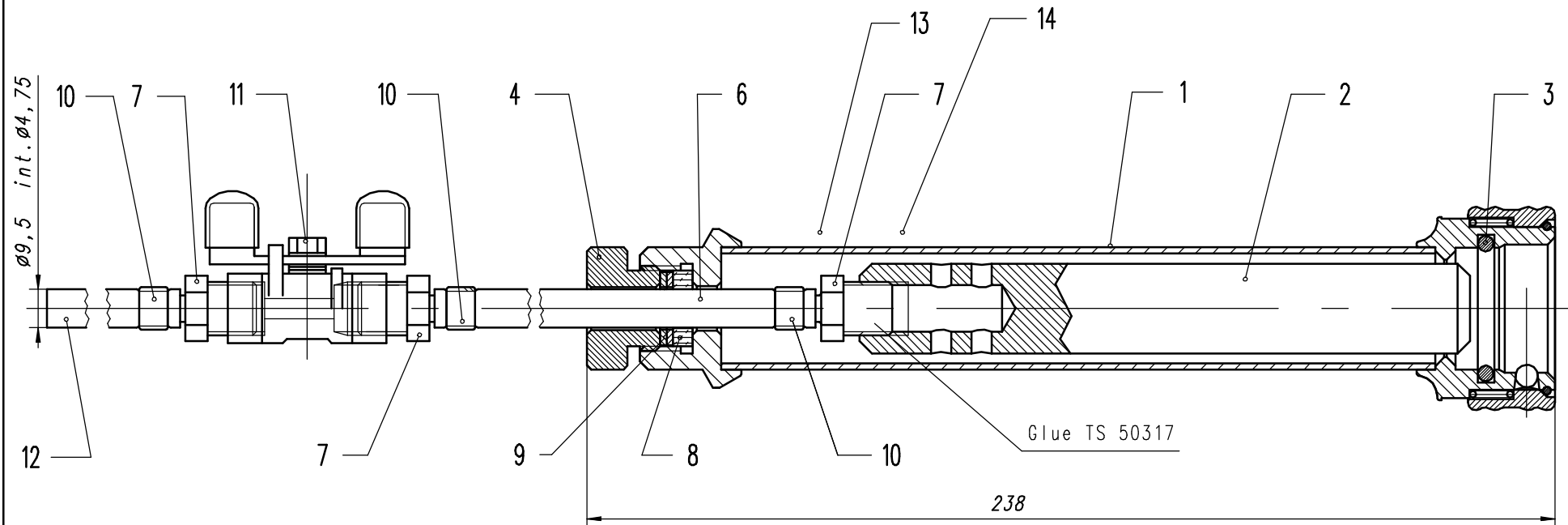
All parts bonded with TS 50317

Item	Qt	Weight	Description	Material	TS #	ND #
1	1	4	O-Ring Ø29.75x3.53	FFKM	11147	
2	1	493	Storage tube 1" Oxy Press Dip 1	AISI 304	16010	30595
4	1	449	Weight stainless steel	AISI 316	16005	40487
6	1	60	Wheel 6 1/2"	AISI 316	16007	40489
7	1	2	Seal	NBR	16520	
8	2	10	Pressure water 10.5/18 x 1.6	A2	16521	
9	1	59	Valve G1/4" female cylindrical thread	-	20151	41094
10	0	2	Clip inox 9-11 14	AISI 304	16519	
10	2	20	Hose nipple	AISI 304	16518	
11	3	2	Clip inox 9-11 14	AISI 304	16519	
12	1	1140	Tanol hose 15m	Tanol	16514	
13	1	160	Tanol hose 3m	Tanol	16511	
14	1	1	Label "Oxy"	-	50009	40347
15	1	5	Label "Tanksystem"	-	50006	40343


2	3.7.02	Item 9 -> DIN 433 M10
2	5.3.1999	TS 16517 -> TS 20151
Is	Date	Visa

TOLERANCES UNLESS OTHERWISE SPECIFIED										Weight:		ISSUE 2 : 3.7.2002									
Norm. Size		Over		6		30		100		300		1000		Angles		2505 Eff.					
Fit		To		6		30		100		300		1000		2000				MPSA 4110			
Fine		±		0,05		0,1		0,15		0,2		0,3		0,5		0,1°					
REMOVE ALL BURRS AND SHARP EDGES										1:2											
Drawn:					Control:							Replacement for:		Replaced by:							
CPI 08.06.1994												ND		ND							
HERMeTic OXY														TS 10070							
OXY 15m Tanol hose St.St. 1'														ND 30276							
														REF ND							
This drawing is our property and must not without our permission be copied or made available to others.																				Enraf Tanksystem SA	
The receiver is responsible for every misuse.																				RUE DE L'INDUSTRIE 2 CH-1630 BULLE Tel. +41 26 91 91 500 - Fax +41 26 91 91 505	

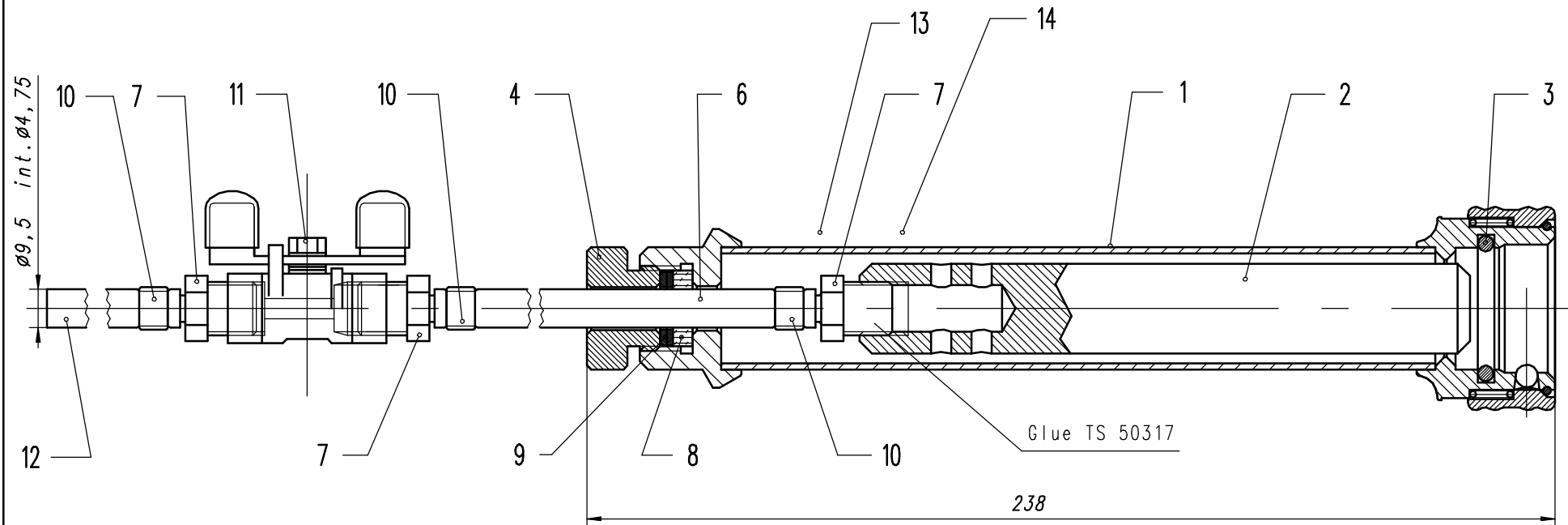
This drawing is our property and must not without our permission be copied or made available to others.  
The receiver is responsible for every misuse.



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	493	Storage tube 1" Oxy Press Dip 1	AISI 304	16010	30595
2	1	439	Weight	Brass	16002	40219
3	1	2	O-Ring $\varnothing 29,7 \times 3,5$	Viton	11132	-
4	1	60	Wheel G 1/2"	AISI 316	16007	40489
6	1	1140	Tanol hose 15m	Tanol	16514	-
7	3	19	Hose nipple	Brass	16500	-
8	1	2	Seal	NBR	16520	-
9	2	10	Pressure walter 10.5/18 x 1.6	A2	16521	-
10	3	3	Hose clip	-	16507	-
11	1	59	Valve G1/4" female cylindrical thread	-	20151	41094
12	1	160	Tanol hose 3m	Tanol	16511	-
13	1	1	Label "Oxy"	-	50009	40347
14	1	5	Label "Tanksystem"	-	50006	40343

TOLERANCES UNLESS OTHERWISE SPECIFIED										Weight:		2447 Th. 2445 Eff.		ISSUE 3 : 3.7.2002	
Norm. Size	Over	6	30	100	300	1000	Angles	1 : 1		MPSA 3110					
Fit	To	6	30	100	300	1000	2000								
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5			0,1°					
REMOVE ALL BURRS AND SHARP EDGES															
Drawn:		CPI 06.06.1994						Control:		1 : 1		Replacement for:		Replaced by:	
												ND A-307.0.00		ND	
HERMeTic OXY												TS 10011			
OXY 15m Tanol hose 1'												ND 30408			
												REF ND			
This drawing is our property and must not without our permission be copied or made available to others. The receiver is responsible for every misuse.										Enraf Tanksystem SA RUE DE L'INDUSTRIE 2 CH-1630 BULLE Tel. +41 26 91 91 500 - Fax +41 26 91 91 505					

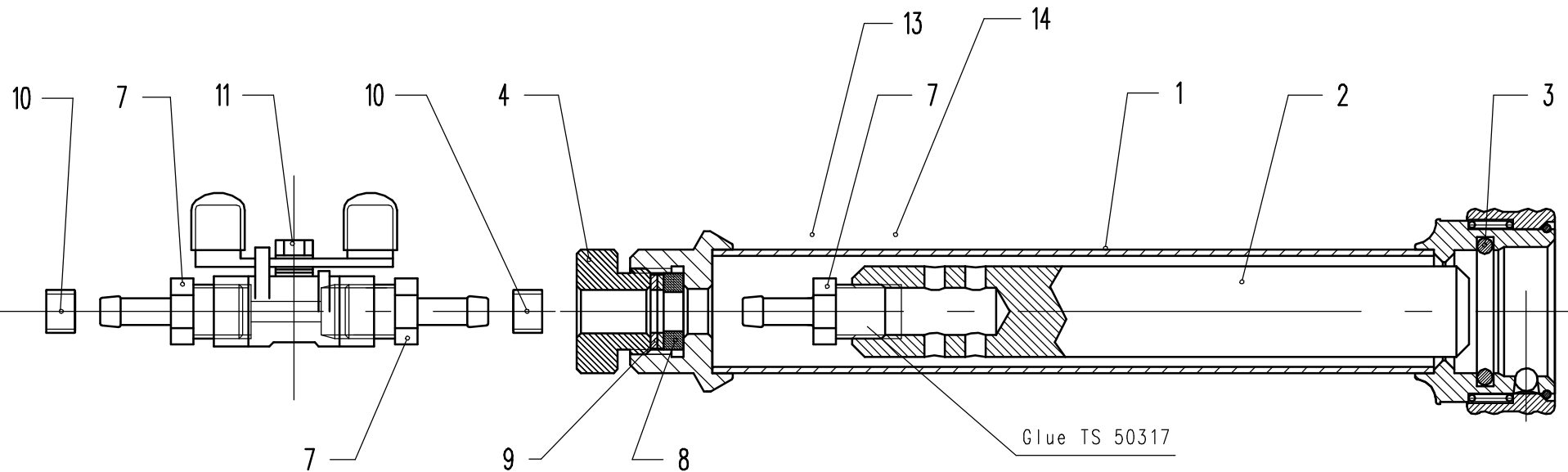
3	3.7.02	Item 9 -> DIN 433 M10
3	12.12.01	api - joint washer
Is	Date	Visa Modification




Item	Qt	Weight	Description	Material	TS #	ND #
1	1	493	Storage tube 1' Oxy Press Dip 1	AISI 304	16010	30595
2	1	439	Weight	Brass	16002	40219
3	1	2	O-Ring Ø29.7x3.5	Viton	11132	-
4	1	60	Wheel G 1/2"	AISI 316	16007	40489
6	1	2100	Tanol hose 30m	Tanol	16515	-
7	3	19	Hose nipple	Brass	16500	-
8	1	2	Seal	NBR	16520	-
9	2	10	Pressure walter 10.5/18 x 1.6	A2	16521	-
10	3	3	Hose clip	-	16507	-
11	1	59	Valve G1/4" female cylindrical thread	-	20151	41094
12	1	160	Tanol hose 3m	Tanol	16511	-
13	1	1	Label "Oxy"	-	50009	40347
14	1	5	Label "Tanksystem"	-	50006	40343

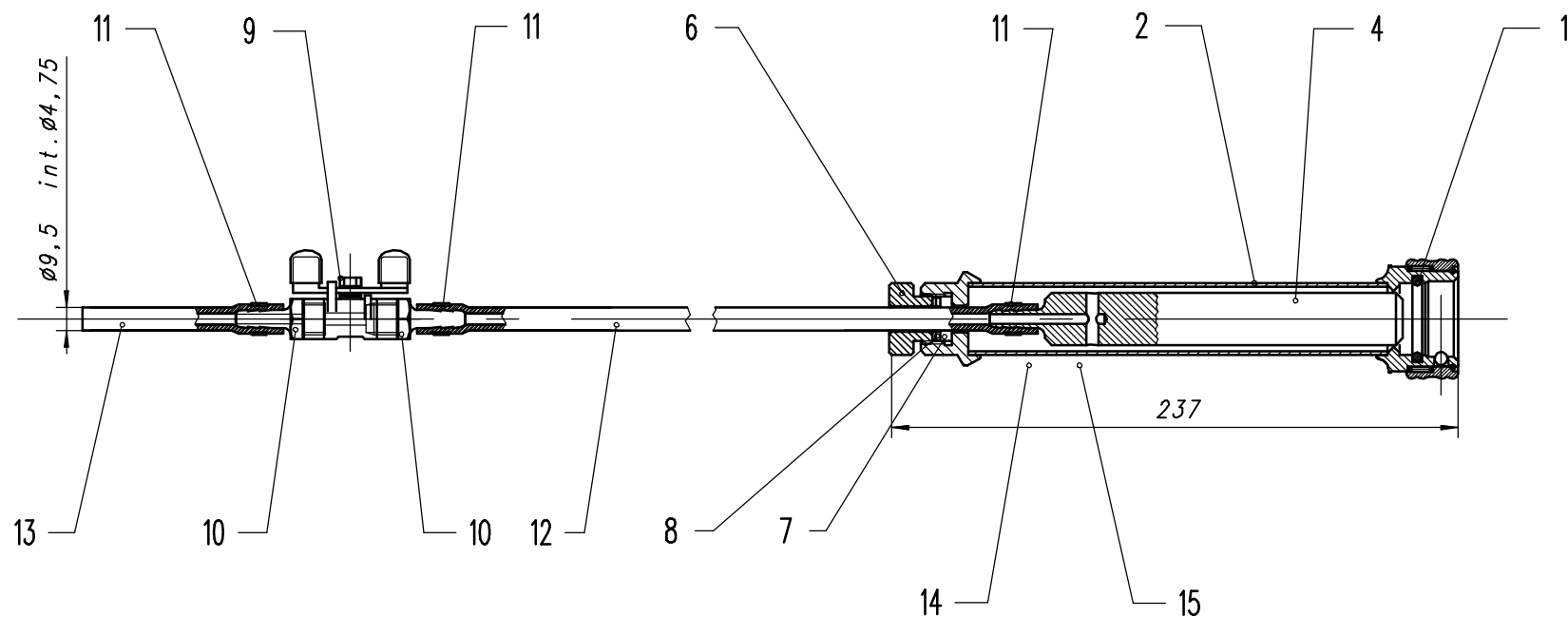
TOLERANCES UNLESS OTHERWISE SPECIFIED										Weight:		ISSUE 3 : 3.7.2002	
Norm. Size	Over	6	30	100	300	1000	Angles			3407 Th. 3400 Eff.			
Fit	To	6	30	100	300	1000	2000						
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°					
REMOVE ALL BURRS AND SHARP EDGES										1 : 1		MPSA 3110	
Drawn:		Control:						Replacement for:		Replaced by:			
CPI 06.06.1994								ND A-307.0.00		ND			
HERMeTic OXY OXY 30m Tanol hose 1'										TS 10012			
										ND 30409			
										REF ND			
This drawing is our property and must not without our permission be copied or made available to others. The receiver is responsible for every misuse.										Enraf Tanksystem SA			
										RUE DE L'INDUSTRIE 2 CH-1630 BULLE Tel. +41 26 91 91 500 - Fax +41 26 91 91 505			

3	3.7.02	Item 9 -> DIN 433 M10
3	12.12.01	api - joint washer
Is	Date	Visa Modification



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	493	Storage tube 1" Oxy Press Dip 1	AISI 304	16010	30595
2	1	439	Weight	Brass	16002	40219
3	1	2	O-Ring Ø29.7x3.5	Viton	11132	-
4	1	60	Wheel G 1/2"	AISI 304	16007	40489
7	3	19	Hose nipple	Brass	16500	-
8	1	2	Seal	NBR	16520	-
9	2	10	Pressure washer 10.5/18 x 1.6	A2	16521	-
10	3	3	Hose clip	-	16507	-
11	1	59	Valve G1/4" female cylindrical thread	-	20151	41094
13	1	1	Label "Oxy"	-	50009	40347
14	1	5	Label "Enraf Tanksystem"	-	50006	40343


TOLERANCES UNLESS OTHERWISE SPECIFIED								Weight: 1147 Th. 1150 Eff.		ISSUE 3 : 3.7.2002	
Norm. Size	Over	6	30	100	300	1000	Angles	1:1		<div>MPSA 3110</div> <div></div>	
Fit	To	6	30	100	300	1000	2000				
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5				
REMOVE ALL BURRS AND SHARP EDGES								1:1		<div>Replacement for: ND</div> <div>Replaced by: ND</div>	
Drawn: CPI 06.06.1994				Control:							
HERMeTic OXY								TS 10009			
OXY without hose								ND 30413			
								REF ND			

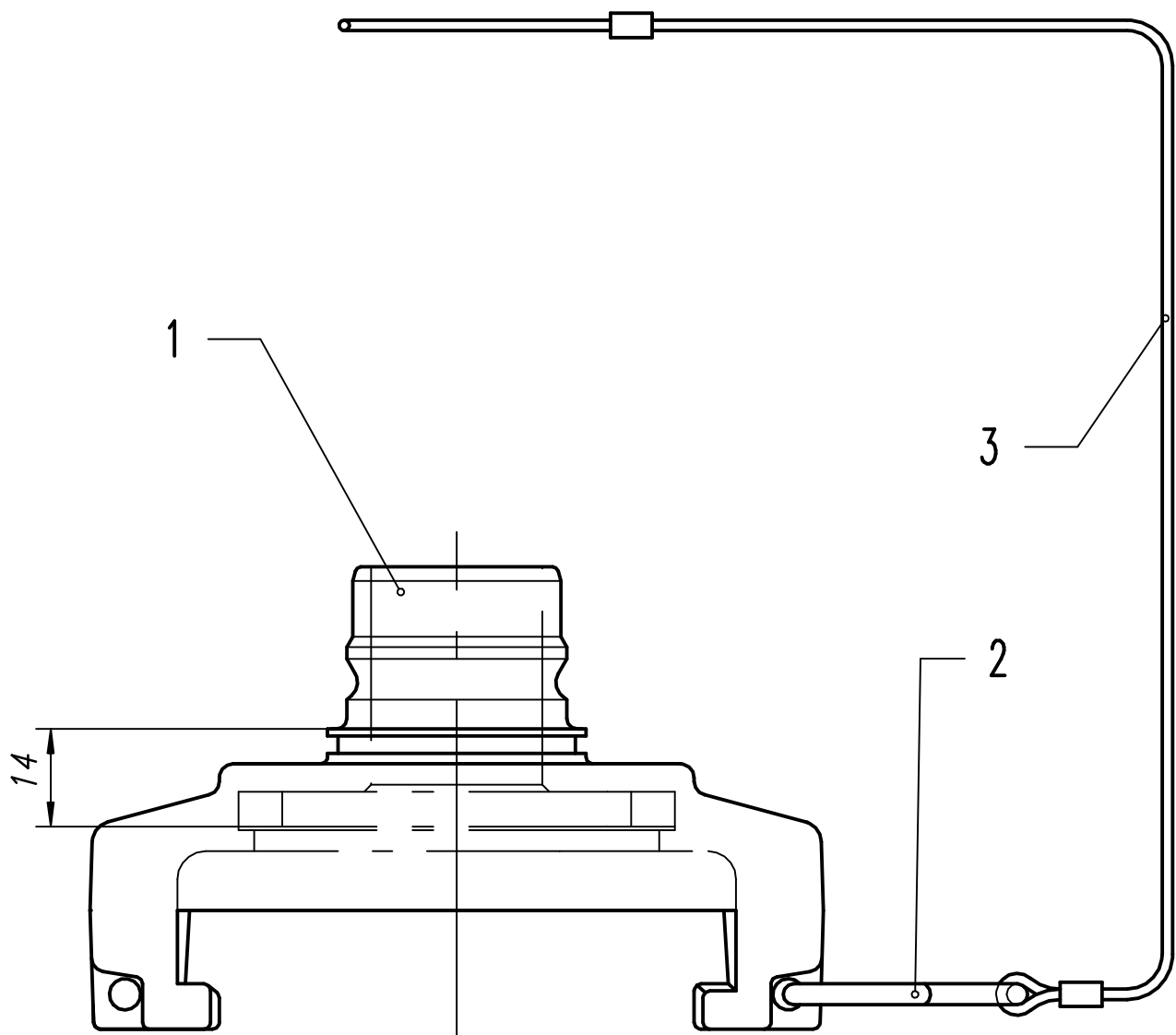


All parts bonded with TS 50317

Item	Qt	Weight	Description	Material	TS #	ND #
1	1	4	O-Ring Ø29.75x3.53	FFKM	11147	
2	1	493	Storage tube 1" Oxy Press Dip 1	AISI 304	16010	30595
4	1	449	Weight stainless steel	AISI 316	16005	40487
6	1	60	Wheel 6 1/2"	AISI 316	16007	40489
7	1	2	Seal	NBR	16520	
8	2	10	Pressure water 10.5/18 x 1.6	A2	16521	
9	1	59	Valve G1/4" female cylindrical thread	-	20151	41094
10	0	2	Clip inox 9-11 14	AISI 304	16519	
10	2	20	Hose nipple	AISI 304	16518	
11	3	2	Clip inox 9-11 14	AISI 304	16519	
12	1	2100	Tanol hose 30m	Tanol	16515	-
13	1	160	Tanol hose 3m	Tanol	16511	-
14	1	1	Label "Oxy"	-	50009	40347
15	1	5	Label "Tanksystem"	-	50006	40343

2	3.7.02	Item 9 -> DIN 433 M10
2	5.3.1999	TS 16517 -> TS 20151
Is	Date	Visa

TOLERANCES UNLESS OTHERWISE SPECIFIED										Weight:		ISSUE 2 : 3.7.2002			
Norm. Size		Over		6	30	100	300	1000	Angles	3655 Eff.	MPSA 4110				
Fit		To	6	30	100	300	1000	2000							
Fine		±	0,05	0,1	0,15	0,2	0,3	0,5							0,1°
REMOVE ALL BURRS AND SHARP EDGES										1:2	Replacement for:		Replaced by:		
Drawn:					Control:						ND	ND			
CPI 08.06.1994															
HERMeTic OXY OXY 30m Tanol hose St.St. 1'												TS 10071			
												ND 30414			
										REF ND					
This drawing is our property and must not without our permission be copied or made available to others. The receiver is responsible for every misuse.										Enraf Tanksystem SA RUE DE L'INDUSTRIE 2 CH-1630 BULLE Tel. +41 26 91 91 500 - Fax +41 26 91 91 505					



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	400	Connector 1" - 2" FKM	-	22563	41032
2	1	5	S Holder	AISI 304	11902	40537
3	1	4	Cable assy	-	55112	40525

TOLERANCES UNLESS OTHERWISE SPECIFIED							
Norm. Size	Over	6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5

Weight:  
409 Th.  
0 Eff.

ISSUE 1 : 14.3.1997

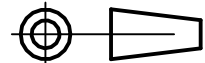
REMOVE ALL BURRS AND SHARP EDGES

Drawn:  
UPR 14.03.1997

Control:

1:1

MPSA  
4110



Replacement for:  
ND

Replaced by:  
ND

Valves

Adaptor 1"-2"

TS 22564

ND 41039

REF ND

This drawing is our property and must not without our permission be copied or made available to others.  
The receiver is responsible for every misuse.

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RUE DE L'INDUSTRIE 2 CH-1630 BULLE  
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